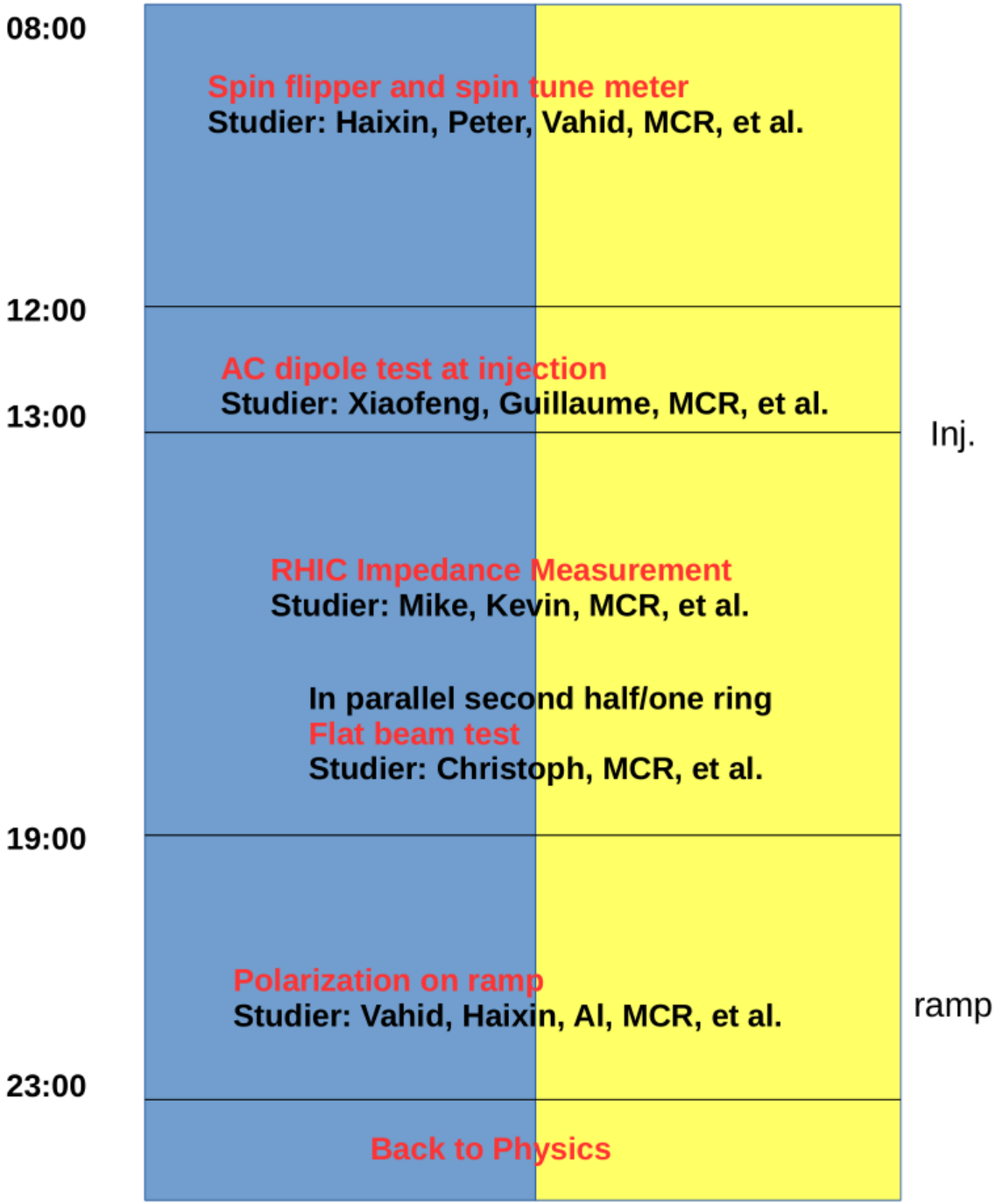
APEX Schedule for May 24, 2017

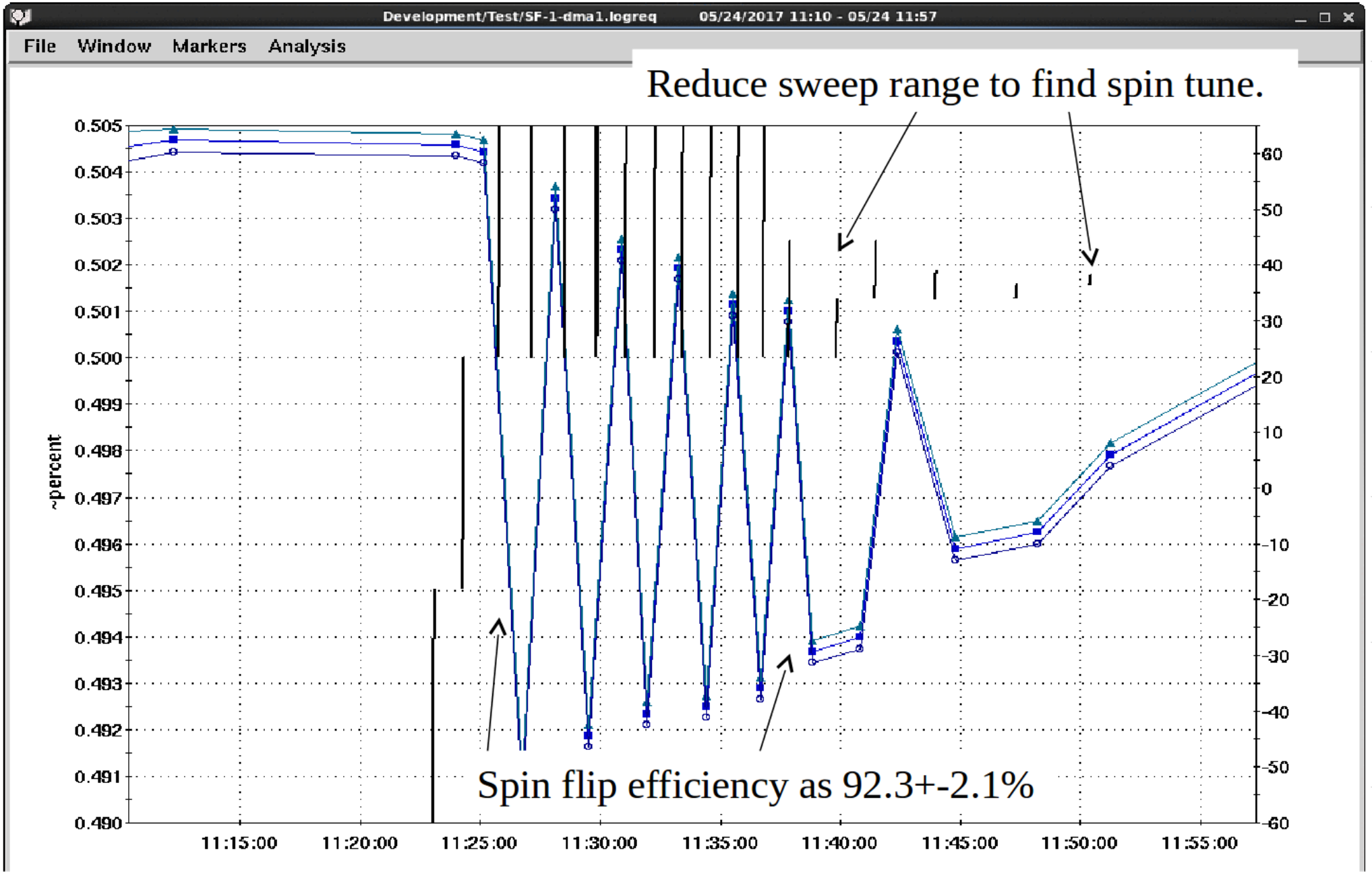


Spin Flipper @ Injection

H. Huang, P. Oddo, C. Liu, A. Marusic, F. Meot, V. Ranjbar

May 26, 2017
APEX Meeting

Polarization and Driving Tune Sweep (3sec)



the vertical black bars show the driving tune sweep range.

Spin Flipper Test at Injection

Start	End	Chrom	Range	Time (sec)	Ratio
0.5	0.505	4.95	0.005	3.	-0.923+-0.021
0.49917	0.50417	3.15	0.005	3.	-0.915+-0.024
0.49917	0.50417	3.15	0.005	1.	-0.975+-0.019
0.49917	0.50417	3.15	0.005	0.5	-0.952+-0.027

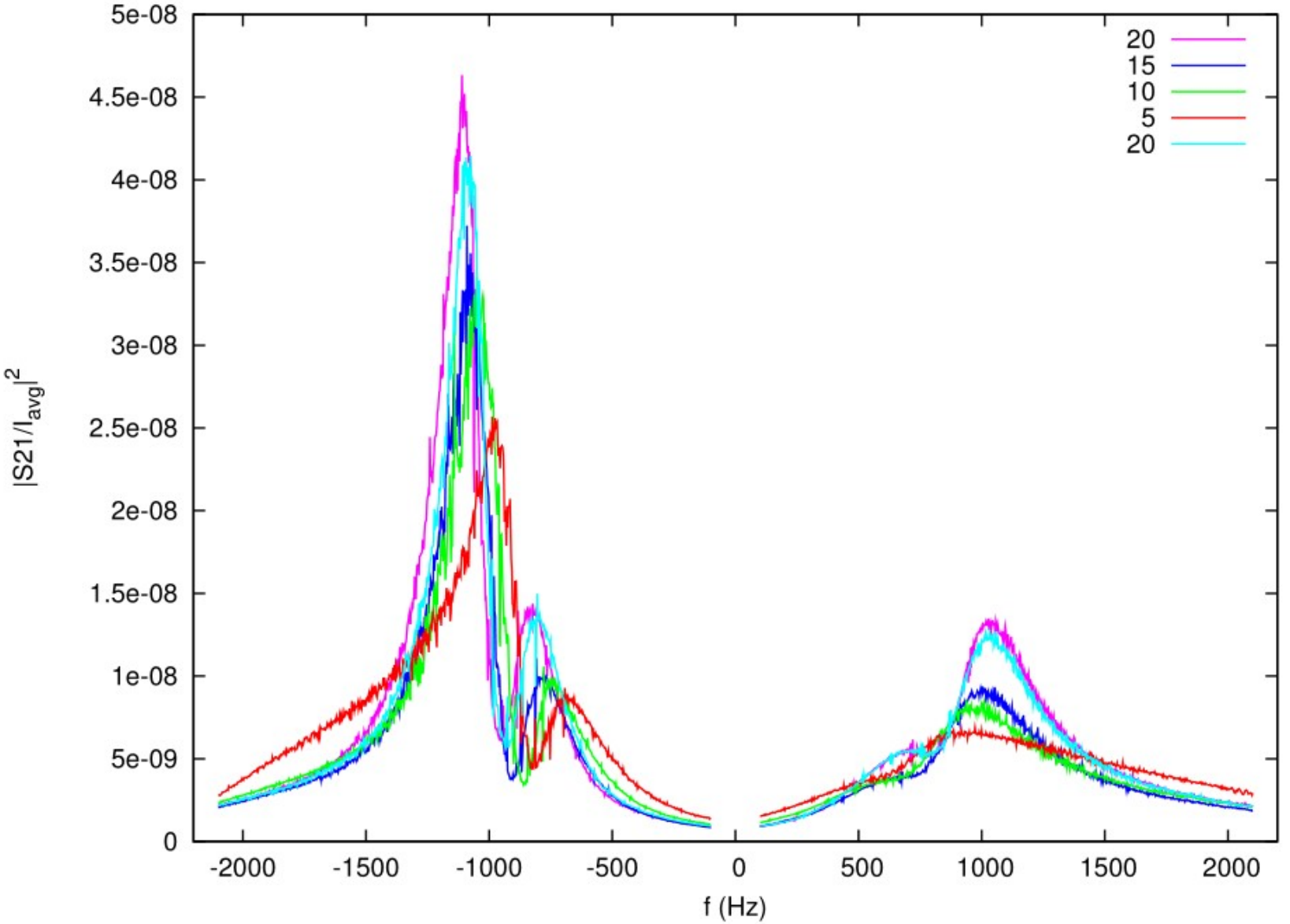
- The weak dependence on sweep speed: maybe there are more than one resonance (in adittion to the strong drving one, probably there are high order, or sideband weak ones), such that the slower crossing speed may not result in better flip efficiency.

Spin Flipper Test at Injection

- We have done spin flipper study in four sessions so far. April 6, April 19, May3 and May 24. Measured ΔD' was 0.0036 for the first case and 0.0033 for the rest cases on May 3. As comparison, ΔD' was 0.007 on April 6, and 0.009 on May 3 (with poor flip efficiency), but was not measured on Apirl 19(first 90+% flip efficiency).
- The difference among April 19, May 3 and May 24: D' and sextupole settings are the same. When we had worse efficiency(May 3), e-lens was on. If the two solenoids are not fully canceled, there could be some coupling resonances. Should we repeat the measurements with e-lens on at injection?
- Move on to store to check spin flipper efficiency there. Need some thinking on why we lose polarization even though the tune sweep range does not cover the spin tune. Can this be explained by coupling effect?

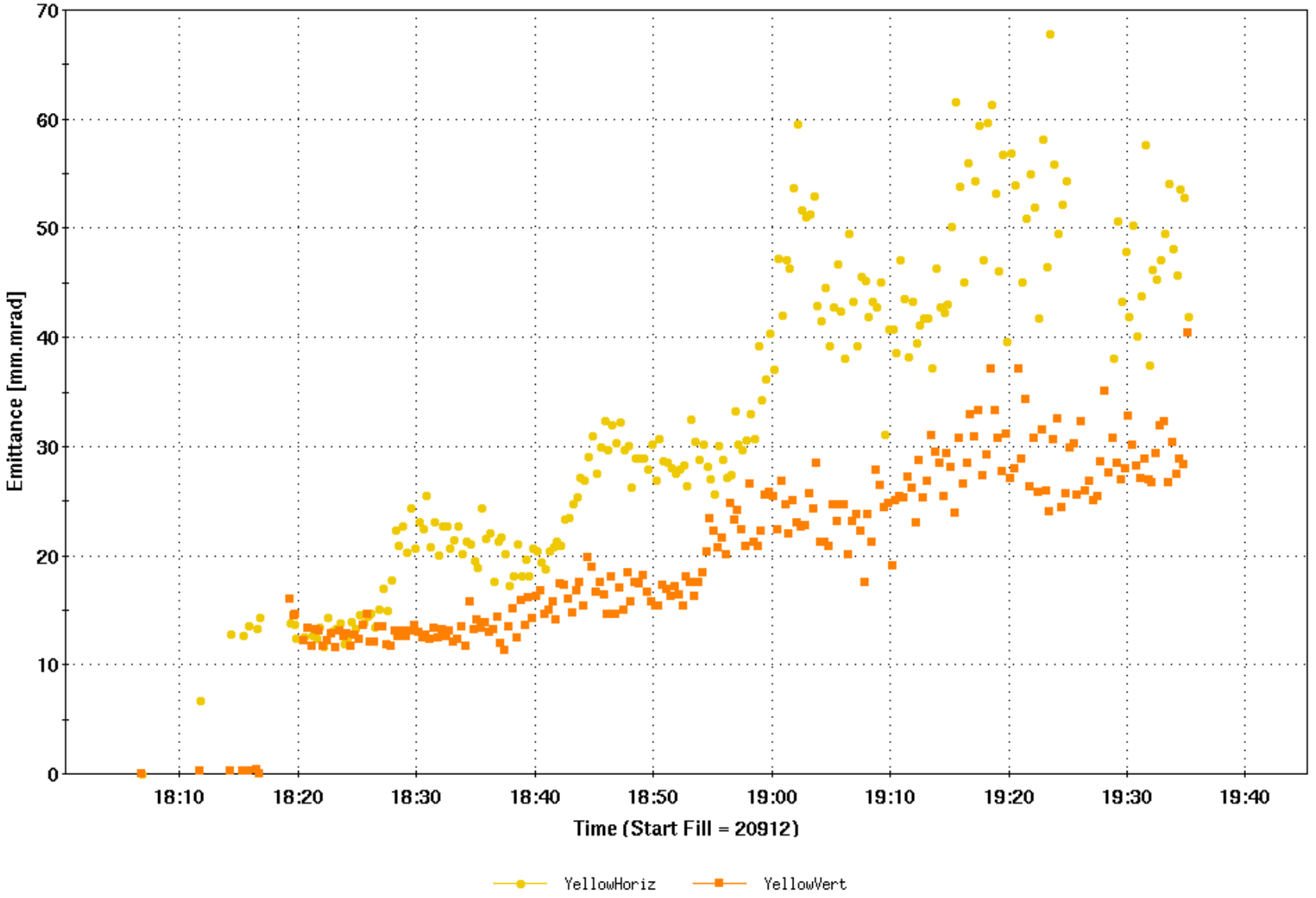
RHIC Ring Impedance Measurement

Mike B., Kevin M.



Flat Beam Test in RHIC

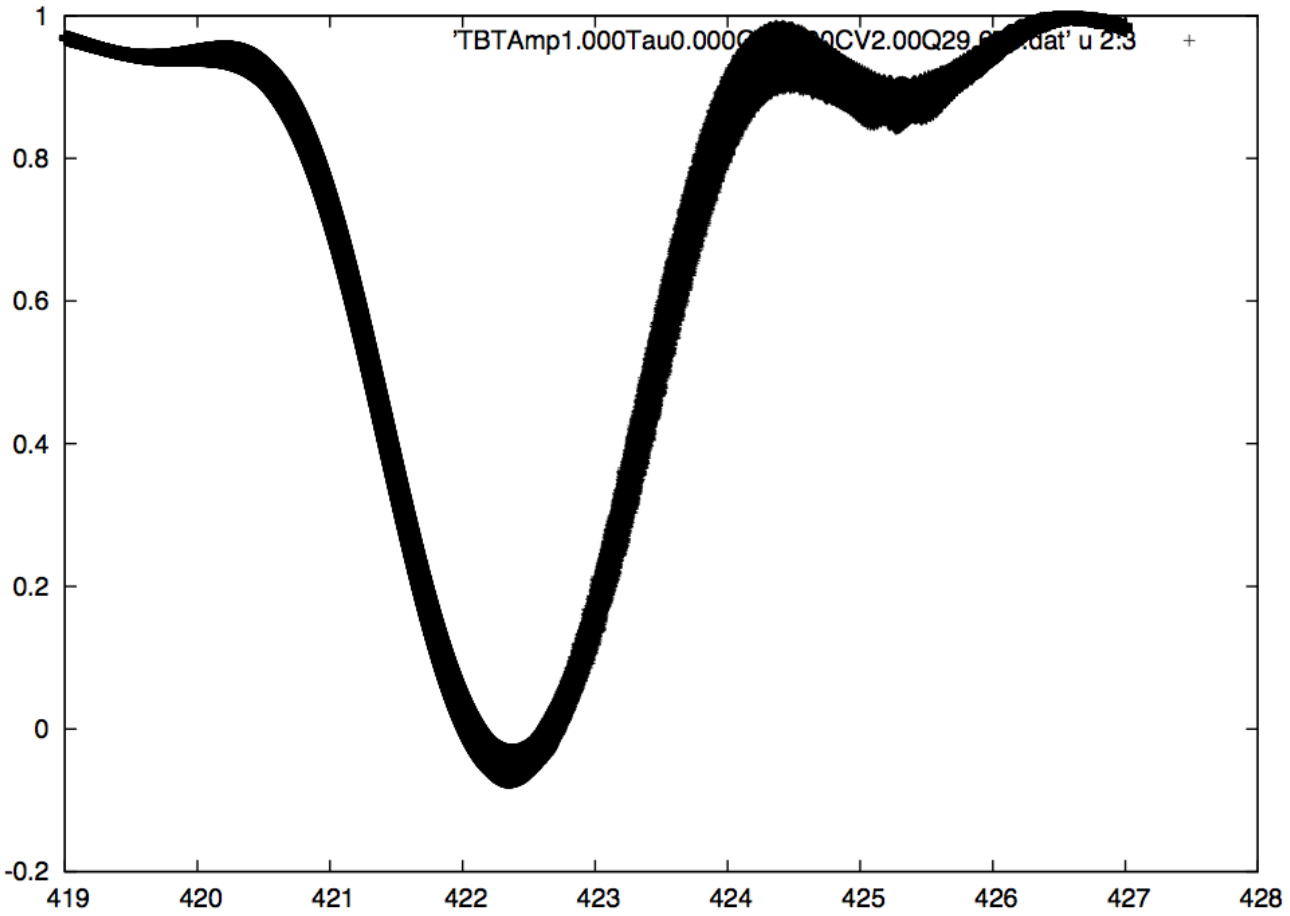
Angelika, Christoph



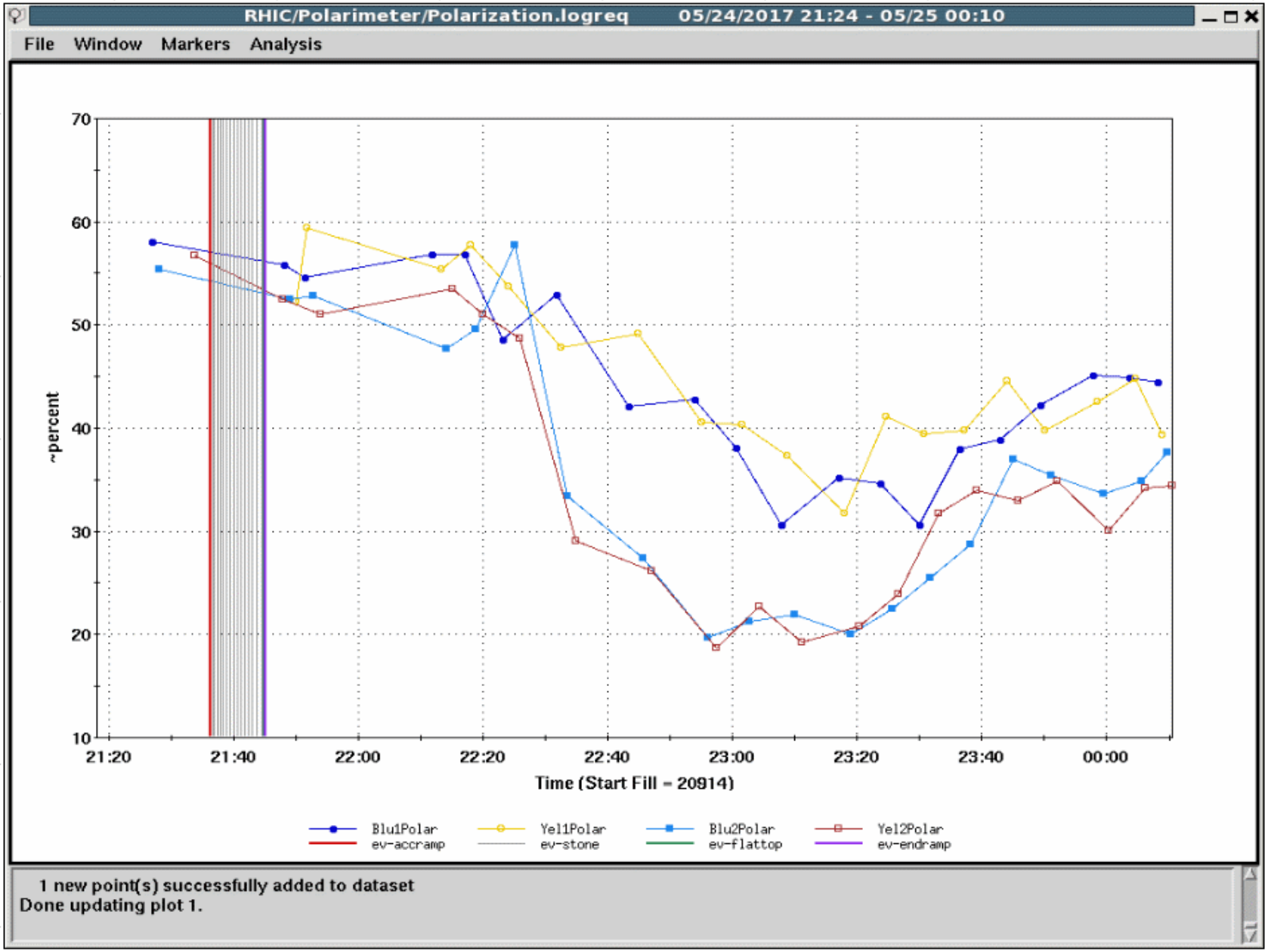
Polarization Scan of NU+393 Spin Resonance

V. Ranjbar, H. Huang, A. Marusic and F. Meot

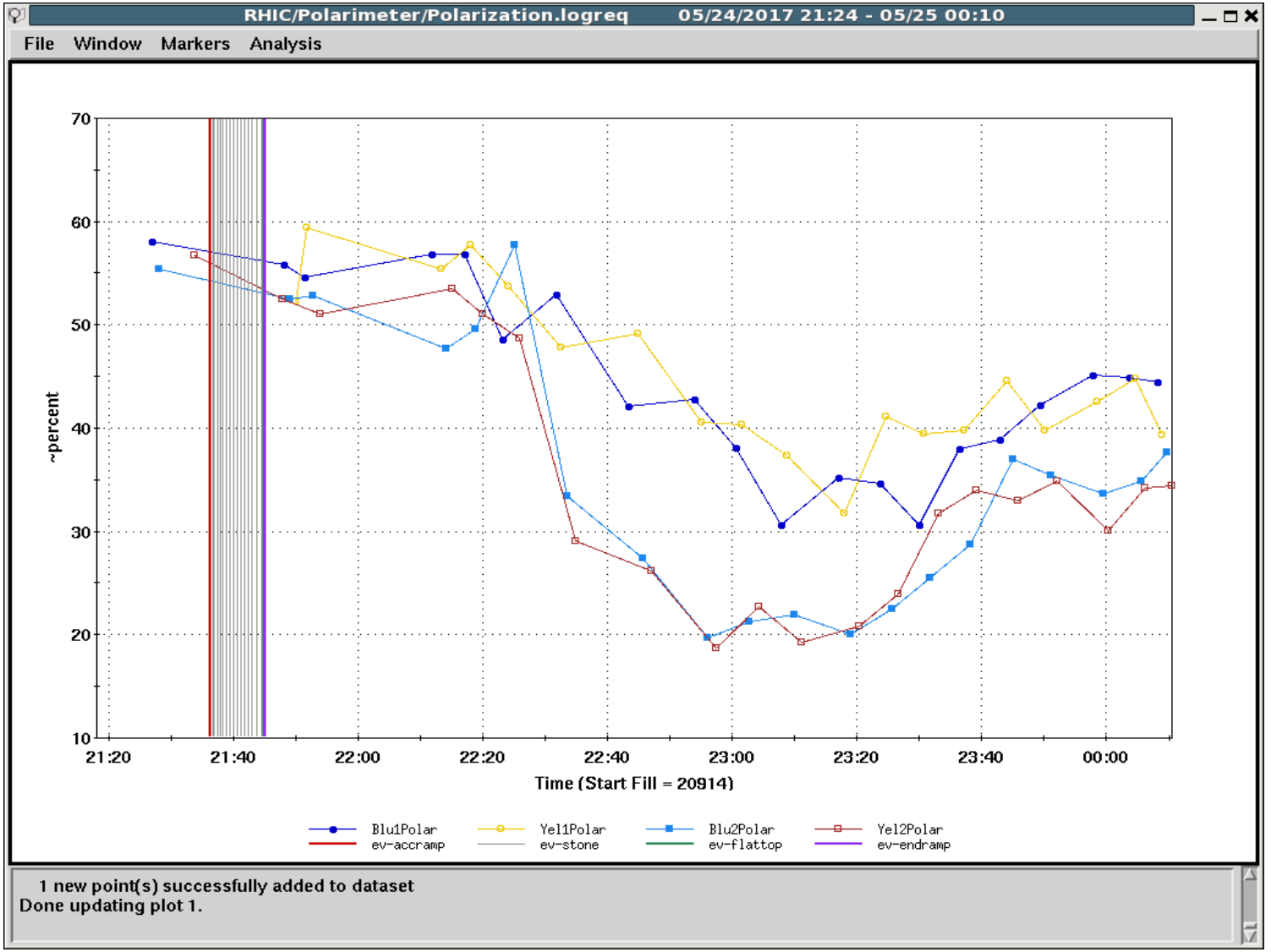
Simulation:


'TBTAmp1.000Tau0.000
0CV2.00Q29.
.dat' u 2:3
1
0.8
0.6
0.4
0.2
0
-0.2
419
420
421
422
423
424
425
426
427
428

Results


RHIC/Polarimeter/Polarization.logreq 05/24/2017 21:24 - 05/25 00:10
File Window Markers Analysis
~percent
70
60
50
40
30
20
10
21:20
21:40
22:00
22:20
22:40
23:00
23:20
23:40
00:00
Time (Start Fill = 20914)
Blu1Polar
Yel1Polar
Blu2Polar
Yel2Polar
ev-accramp
ev-stone
ev-flattop
ev-endramp
1 new point(s) successfully added to dataset
Done updating plot 1.

Results


RHIC/Polarimeter/Polarization.logreq 05/24/2017 21:24 - 05/25 00:10
File Window Markers Analysis
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70
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21:40
22:00
22:20
22:40
23:00
23:20
23:40
00:00
Time (Start Fill = 20914)
Blu1Polar
ev-accramp
Yel1Polar
ev-stone
Blu2Polar
ev-flattop
Yel2Polar
ev-endramp
1 new point(s) successfully added to dataset
Done updating plot 1.